

# Daily GLOWBUGS

## Digest: V1 #58

via AB4EL Web Digests @ SunSITE

**Purpose: building and operating vacuum tube-based QRP rigs**

[\*\*AB4EL Ham Radio Homepage @ SunSITE\*\*](#)

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%%%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%%

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**Subject: glowbugs v1 #58**

**glowbugs** **Monday, June 16 1997**

**Volume 01 : Number 058**

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**Date:** Sun, 15 Jun 1997 06:49:40 +0000  
**From:** "Brian Carling, Radio AF4K" <bry@mnsinc.com>  
**Subject:** 6CD6GA sweepers in amp service

I have a question regarding 6CD6GA sweep tubes.  
The ARRL Handbook listing for them doesn't really tell us much.  
No MAXIMUM listings other than Plate Dissipation of 20 watts.  
Can someone supply the data on maximum plate voltage & current  
please?

I would like to build a 4 tube parallel amplifier using these,  
in G-G and wanted to know what is the highest reasonable plate  
voltage & current to use. I want to get about 500 watts INPUT  
in CW and SSB service.

I know it has been done with 6KD6 tubes per the 1969 HANDBOOK  
PP 197-200

They run that at 900V DC and get 1200 watts p.e.p. input, so  
if I run these at HALF that it should work. ( 667 mA anode current)  
for a 600 watt DC input, which seems reasonable for ICAS service with  
these. They have dire warnings about not leaving it "key down" for  
more than 30 seconds with over 100 mA flowing!

Perhaps I should use 6 of them?!

Now, they suggest the 6LQ6 as a substitute. Let's see...

Well, these both appear to have a slightly higher plate current rating  
than my 6CD6es but not by much. Heater currents are about the same if  
that is any indication.

Any thoughts..... I know "Don't use sweep tubes" (grin!)  
\*\*\*\*\*

\*\*\* 73 from Radio AF4K/G3XLQ Gaithersburg, MD USA \*  
\*\* E-mail to: bry@mnsinc.com \*  
\*\*\* See the interesting ham radio resources at: \*  
\*\* <http://www.mnsinc.com/bry/> \*  
\*\*\*\*\*

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**Date:** Sun, 15 Jun 1997 08:57:28 -0500 (CDT)  
**From:** Bob Roehrig <[broehrig@admin.aurora.edu](mailto:broehrig@admin.aurora.edu)>  
**Subject:** Re: 6CD6GA sweepers in amp service

On Sun, 15 Jun 1997, Brian Carling, Radio AF4K wrote:

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6CD6 Max ratings:  
Plate voltage 700  
Plate dissipation 20W  
Screen voltage 175  
Screen dissipation 3W  
Avg cathode current 200ma

E-mail [broehrig@admin.aurora.edu](mailto:broehrig@admin.aurora.edu) 73 de Bob, K9EUI  
CIS: Data / Telecom Aurora University, Aurora, IL  
630-844-4898 Fax 630-844-5530

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**Date:** Sun, 15 Jun 1997 09:03:13 -0700 (PDT)  
**From:** Ken Gordon <[keng@uidaho.edu](mailto:keng@uidaho.edu)>  
**Subject:** Re: 6CD6GA sweepers in amp service

> I have a question regarding 6CD6GA sweep tubes.  
> The ARRL Handbook listing for them doesn't really tell us much.  
> No MAXIMUM listings other than Plate Dissipation of 20 watts.  
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> please?

According to Bill Orr's handbook, 19th edition, the 6DQ5, which is listed in the ARRL handbook as having 24 watts plate dissipation, and has nearly the same characteristics as your 6CD6, can be run at a maximum of 200 watts input per tube. Plate voltage of 800 at 250 ma. Useful power output of 121 watts. This is for grid driven class AB1 mode.

For the 6CD6, I would run it at the next lower rating of 700 vdc 182 ma per tube at around 125 watts/tube input.

I wouldn't hold the key down very long however!

Somewhere I have your snail mail address. I will post the data to you.

Ken W7EKB

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**Date: Sun, 15 Jun 1997 15:34:49 +0000**  
**From: "Brian Carling, Radio AF4K" <bry@mnsinc.com>**  
**Subject: 88 mH toroids**

Hi - someone was recently looking for some 88 mH toroids.

Well, I found some for you.

He doesn't have many left, but a fellow was selling these at the Frederick, MD hamfest today:

Julius Barthelme - (717) 334-7084

I think he lives in southern PA.

I hope that helps you!

Bry

\*\*\*\*\*  
\*\*\* 73 from Radio AF4K/G3XLQ Gaithersburg, MD USA \*  
\*\* E-mail to: bry@mnsinc.com \*  
\*\*\* See the interesting ham radio resources at: \*  
\*\* <http://www.mnsinc.com/bry/> \*  
\*\*\*\*\*

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**Date: Sun, 15 Jun 1997 21:27:27 +0000**  
**From: Sandy W5TVW <ebjr@worldnet.att.net>**  
**Subject: Re: EICO dipper coils**

Details about coil set for the EICO 710 Grid Dip Meter:

Coil	Freq. range	Inductance	Remarks
A	0.4-0.7 Mhz	2.75 mHy.	Slug-tuned, center-tapped
B	0.7-1.38	950 uhy.	Slug tuned, center-tapped
C	1.38-2.9	225 uHy.	Slug-tuned, center-tapped
D	2.5-7.5	54.5 uHy.	Single layer closewound
E	7.5-18	7.9 uHy.	ditto
F	18-42	1.5 uHy.	ditto
G	42-100	0.3 uHy.	ditto
H	100-250	???	Hairpin loop 3/16"
diameter. Legs spaced 3/4"			
center to			
center, 1-5/8" long. Reduced to 1/8"			
pins last			
1/4" of hairpin (open end)			

Inductances measured on a TS-617/U military "Q" meter, verified on D-G ranges with Autek RF-1 Analyst. Original coils D-G wound on 3/4" polystyrene forms. A-C coils were wound on small 1/4" formers (universal windings like an RF choke) then cemented into 3/4" polystyrene coil forms. As I recall, I think the

Heathkit  
used the same 3/4" pin spacing scheme and the coil forms were very similar.

Hope this helps those that have a 710 and no coils!

73,

E. V. Sandy Blaize, W5TVW  
"Boat Anchors collected, restored, repaired, traded and used!"  
417 Ridgewood Drive,  
Metairie, LA., 70001  
ebjr@worldnet.att.net  
\*\*Looking for: 860 tubes, WL-460 tubes\*\*  
\*\*Butternut HF2V antenna, G-R test gear.....\*\*\*

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Date: Sun, 15 Jun 1997 19:38:55 +0000  
From: Sandy W5TVW <ebjr@worldnet.att.net>  
Subject: CHEAP 6AG5 tube source

Everyone wanted to know WHO had the cheapo 6AG5's I got 200 of them for \$20 SHIPPED and they are military surplus (late) and in sealed boxes. Now's your chance to stock up.

- -----snip-----

JAN 6186W, equal to 6AG5WA, sharp cut-off pentodes 7 pin miniature made by Philips in the USA 1986, NOS, individual boxes, 5000 available, shipping in the USA: 1 - 199 \$4.00, 200 or more shipping free!  
\$0.10 each

For a complete list of ELECTRON TUBES (both new and/or used), various ANTIQUE RADIOPARTS or ELECTRONIC TEST EQUIPMENT, please E-mail:

sales@emodus.com

- -----snip-----  
- -----

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Date: Sun, 15 Jun 1997 14:36:54 -0700  
From: Dave <gecko95@ix.netcom.com>  
Subject: Extra CW question...

Hi gang,

I realize this is off topic to some degree, but I don't know where to post it without getting flamed. This has always been a very nice friendly bunch, and I truly feel comfortable asking this here, and it's a serious question by no means meant to be a troll or flame bait. Totally the opposite.

I am going for my Extra on Tuesday. CW has always been my only mode (98%), and I normally CQ and QSO at around 20 wpm with my bug. I never have felt like I wasn't copying 100% - not always paying attention, maybe, but I figured I was copying 100% if I thought about it. I never miss anything important, such as RST, city, state, name, rig and antenna details, etc. I regularly ragchew for 45 minutes or more. When I notice I'm lost, I chock it up to twiddling my rigs or the kids or some other distraction.

My question? Since I am taking the 1(C) code on Tuesday, I have been using a code tape (ARRL I believe) and I'm doing awful! I find that I only can copy for 20 seconds to 40 seconds of 'perfect' copy before I just lose it. This is right at 20 WPM, using the tape's random goofy words. I just block out and it takes a couple of lost words before I get going, but even then it's a struggle after the initial bomb-out.

So now I'm really concerned about the test. Surely a number of the group have taken it. What's the copy typically like? I have Gordon West's book (Extra class) and it gives a typical sample. But what of your experiences? Anyone have the same concerns before going who did ok? Or bombed? Any tips or anecdotes to cheer me on?

Here I thought the written would be hard! HA! My NOVICE test in 1974 had harder questions! For General in '75 I had to DRAW oscillators. I was shocked at the simplicity of both the Advanced and Extra exams (ok - they throw in a couple of tough formula questions, but you can guess those and just know the rest and still pass). I have now passed 15 or so different samples from the URL that gives sample tests, so I know I have the written down pat. I score 85% or better every time, on both Advanced and Extra.

Anyway, any commment on the CW part would be very welcome. Like I said, if I posted this in any of the newsgroups, I would never have a chance of getting any help through all of the anti-cw flames. I love CW and as long as it is still legal to use and there's some one on the other end of the QSO, I'll use it.

Thanks for any help,

100%-Boatanchors/Glowbug-shack 73's

Dave WB7AWK (hope to soon be Extra...)

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Date: Sun, 15 Jun 1997 16:33:42 -0500 (CDT)

**From:** Kevin Pease <hamradio@mm1001.theporch.com>  
**Subject:** Re: EICO dipper coils

That was an interesting post. Strange thing is that I bought a set of heathkit coils at a hamfest, and at a different fest I bought a heathkit dip meter and antenna bridge with no coils so I ended up with both the coils and dip meter at different times. So If one needs coils for an Eico dipper I'll bet they could be found at a hamfest.

I normally look in the odds and ends boxes at the tables with the most old junk. I have found many interesting things that way.

Kevin Pease  
WB0JZG  
Mount Juliet, TN.

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**Date:** Sun, 15 Jun 1997 15:34:45 -0700  
**From:** Dave <gekko95@ix.netcom.com>  
**Subject:** 6AG5 questions

Hi again,

Well, Sandy, I too bought 200 6AG5's (amazing what we'll do to get free shipping!)

Now what? I know they are a sharp-cutoff pentode, but I am not a great designer of tube circuits.  
Any good GB circuits using them?

So why did I buy them, you may ask. I have several old rigs that have them, and at 10 cents each, I now have spares until the end of time. Along with the infamous 35EH5's, and 6DK6's.

Thanks.

Dave WB7AWK

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**Date:** Mon, 16 Jun 1997 01:14:06 +0000  
**From:** Sandy W5TVW <ebjr@worldnet.att.net>  
**Subject:** Re: CHEAP 6AG5 tube source

At 09:34 PM 6/15/97 +0000, you wrote:  
>On Sun, 15 Jun 1997, Sandy W5TVW wrote:  
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>> Everyone wanted to know WHO had the cheapo 6AG5's I got 200  
>> of them for \$20 SHIPPED and they are military surplus (late) and in  
>> sealed boxes. Now's your chance to stock up.  
>> -----snip-----  
>>  
>Could you send me the snail mail address for that company. I don't want to  
>email since I don't want to get on his mailing list.

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>
>
>Kevin Pease
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>
>Sorry, I no longer have it!
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**Date:** Sun, 15 Jun 1997 19:37:29 -0600  
**From:** Doug <doug@sunrise.alpinet.net>  
**Subject:** Re: Extra CW question...

Hi Dave and the Gang.....you've hit the same wall I did back in the mid '60's. I was a General, worked CW all the time and felt I had at least a tolerable command of the Mother Tongue...'til reality hit. I could copy the standard stuff in a QSO...seemed to go "in" easily. So...I sat down and started copying Press and Crypto groups from KPH, KFS and NPG. It started to help a bunch, and after a couple months of off and on practice I passed the Extra...back when it really was a harder test.

I think you're right on the brink of solid copy at 20 wpm....and will be over the "hump" in a short time, if you can just get used to copy at a bit higher speed for an extended length of time. One trick I got to using was concentrating on just what I heard in the cans...and then writing it down on the line, but looking just over the top of the line. That allowed me to copy the letters, but kept me from trying to read the copy. Looking over the letters helps keep them on the line and straight, but allowed me to drop the last letter from the brain channel and take the next one in.

Another help is to get to the point where you can copy about 5-7 letters behind, holding the string in your head while you bump one letter out at a time, allowing your mind to store the next one out of the "Ether". This aids (me anyhow) in concentration, and helps keep copy running smoothly. Running behind (and NOT in a state of Panic!) is the sign of an experienced operator, and also one that indicates he's in command of Morse at that speed.

What got me moving on my Morse was when I "graduated" from just watching a Navy circuit at NPD to setting the control Op's posit...handling traffic. I quickly became aware of my need to be able to copy at 20 or so, in a continuous string....sort of a shock to my system until I got things rolling. Also, I was copying Landline Morse at work...not a bunch, but just enough to really confuse me for a time.

I think you're doing well Dave....just keep at it and DONT become at all discouraged. Not one of us just woke up one morning and found we had the "charm" for higher speed copy....it takes time, but it does come to anyone sufficiently dedicated to learning and self-improvement.

Search the HF bands for good, steady Morse practice...K7HLR is a truly hard working CW practice station, and he sends some really interesting historical plaintext....sorta like reading a book. I sometimes turn the rig on and up a bit, and then walk around the house doing my chores and being educated on a trip to the Antarctic Pole, from a radioman's point of view....neat stuff.

I wish you the best on your test....keep at it, success will come.

73

Doug Dunn, K7YD  
Livingston, MT

Dave wrote:

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>
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> Thanks for any help,  
>  
> 100%-Boatanchors/Glowbug-shack 73's  
>  
> Dave WB7AWK (hope to soon be Extra...)

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**Date:** Thu, 12 Jun 1997 17:17:15 -1000  
**From:** "Peter L. Demmer" <ampruss@hits.net>  
**Subject: Re: Playing with a modern spark tuner --- suprising funzies**

Aloha to the GB gang;  
Back from Dayton and points west. Was traveling for a month. Sorting  
through some 570 e-mail items. I agree, the EO file I purchased (before  
I even got my computer hooked up) is a great source of early radio and  
lab tested data. I tried to postpone my mail until I got back. Glad I  
didnt. 72/3 Peter KH6CTQ

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**Date:** Mon, 16 Jun 1997 08:35:25 -0600  
**From:** mack@mails.imed.com (Ray Mack)  
**Subject: Re[2]: EICO dipper coils**

Do I have deal for you!

I have the opposite situation. I have a set of coils but no dip  
meter.

I have no idea what is fair, so let's start at \$15 plus shipping.  
Rules of Ware apply.

Ray Mack  
WD5IFS  
mack@mails.imed.com  
Friendswood (Houston), TX

Reply Separator

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**Subject: Re: EICO dipper coils**  
**Author:** Sandy W5TVW <ebjr@worldnet.att.net> at mails  
**Date:** 6/15/97 9:27 PM

Details about coil set for the EICO 710 Grid Dip Meter:  
<snip>  
Hope this helps those that have a 710 and no coils!

73,

E. V. Sandy Blaize, W5TVW

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End of glowbugs V1 #58  
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Created by **Steve Modena, AB4EL**  
Comments and suggestions to **modena@SunSITE.unc.edu**

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